

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-11

WASTE DISCHARGE REQUIREMENTS FOR:

SAN QUENTIN DISPOSAL COMPANY AND CAL-POX, INC.
SAN QUENTIN CLASS II-2 SOLID WASTE DISPOSAL SITE
SAN RAFAEL, MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. San Quentin Solid Waste Disposal site is owned by Cal-Pox Inc. and is operated by the San Quentin Disposal Company. These two parties are hereinafter referred to as the dischargers. The Board has previously adopted Order Nos. 67-36 and 69-2 for this site.
2. The landfill covers 37 acres of low-lying diked land adjacent to San Rafael Bay, as shown on Attachment A, which is incorporated herein and made part of this Order. The site is bordered by the bay on the west by the San Rafael Drainage Channel borders on the north and east.
3. The landfill accepts group 3 wastes (inert) and limited group 2 wastes (yard trimmings, cardboard, paper) which are disposed in excavated cells. Currently 21 acres have been filled, and an additional 10 acres located on the eastern edge of the site are proposed for disposal activities contingent on the resolution of a jurisdictional dispute with the Army Corps of Engineers.
4. The site is underlain by a considerable thickness of impervious bay muds. The site poses no threat to any usable groundwater.
5. The beneficial uses of San Rafael Bay and the East San Rafael Drainage Channel are:
 - a. Habitat and resting area for waterfowl
 - b. Fish habitat
 - c. Recreation
 - d. Esthetic enjoyment
 - e. Shellfish habitat
 - f. Navigation
6. Land within 1000 feet of the site is used for light industry and a highway.
7. The Board adopted a Water Quality Control Plan for the San Francisco Bay Basin in April 1975 and this Order implements the Water Quality Objectives stated in that Plan.
8. This disposal site meets the criteria contained in the California Administrative Code, Title 23, Chapter 3, Subchapter 15, for classification of the site as a Class II-2 disposal site to receive limited group 2 and 3 wastes.

9. This Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
11. This project involves the continued operation of a privately owned Class II-2 facility with minor alterations to the land. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.

IT IS HEREBY ORDERED that, San Quentin Disposal Company and Cal-Pox, Inc., and any other person who operates this site, shall comply with the following:

A. Waste Disposal Specifications

1. The disposal of waste shall not cause pollution or a nuisance.
2. Limited group 2 wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.
3. Group 1 wastes shall not be stored or deposited at this site.
4. Waste materials shall not be disposed of in any location where they can be carried from the disposal site and discharged into waters of the State.
5. Sewage sludge and high moisture content group 2 wastes shall not be discharged at the site unless authorized in writing by the Executive Officer of this Board.
6. The discharger shall remove and relocate any wastes which are disposed of at this site in violation of the above requirements.

B. Leachate and Drainage Specifications

1. Leachate from Limited Group 2 wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State.
2. Water used during disposal site operation shall be limited to a minimal amount reasonably necessary for dust control and fire suppression.
3. The disposal area shall be protected from any washout or erosion of wastes or covering material, and from inundation, which could occur as a result of floods having a predicted frequency of one in 100 years.

4. Vertical and lateral hydraulic continuity with usable ground waters shall be prevented by the presence of a soil barrier above the groundwater at least five feet in thickness with the top eighteen inches of soil to be compacted to ninety percent compaction or attain a permeability of 1×10^{-6} cm/sec or less or equivalent.
5. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources shall not contact or percolate through the wastes during disposal operation and for the active life of the site. The perimeter drainage ditches and all other facilities shall be designed to convey maximum anticipated storm runoff, and withstand differential settlement. These facilities shall be constructed over a natural ground or through lined channel or pipes.
6. The migration of methane gas from the disposal site shall be controlled as necessary to prevent the creation of nuisance.

C. Provisions

1. For the existing disposal area, the discharger shall comply with all portions of this Order immediately upon adoption of this Order.
2. The discharger shall submit a site closure plan to the Board no later than August 1, 1979, which shall conform to Resolution No. 77-7 adopted by this Board.
3. The disposal of waste on the ten acres proposed new fill area shall not commence without approval by this Board. The Board will consider this once other necessary permits have been granted.
4. All plans and technical reports requested in Provision C.2 above shall be prepared by a certified engineering geologist or a registered engineer.
5. The discharger shall file with this Board a report of any material change or proposed change in the character, location or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours or ownership of the disposal area(s).
6. The discharger shall maintain a copy of the Order at the site or office so as to be available at all times to site operating personnel.
7. This Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

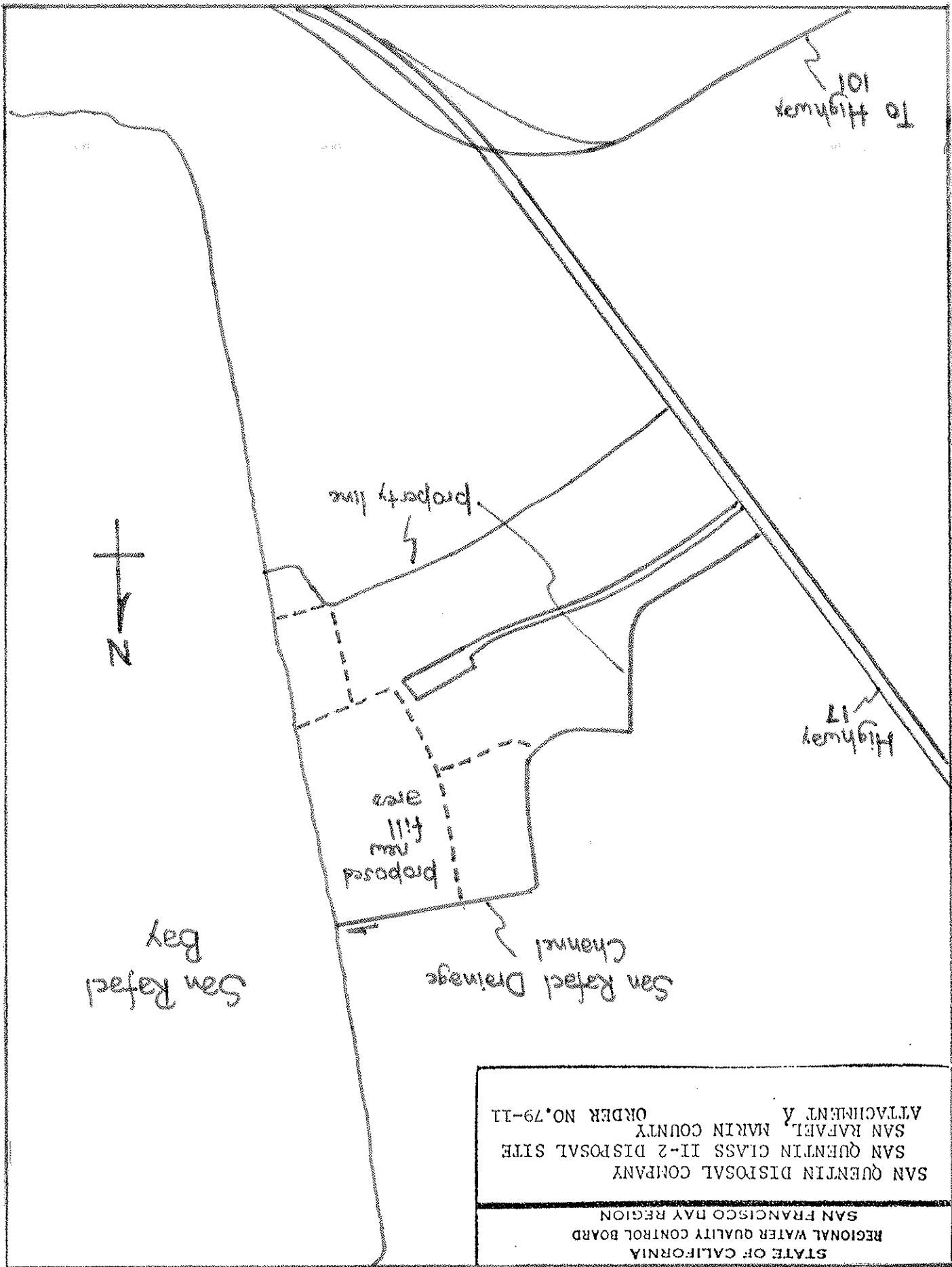
8. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program which may be directed by the Executive Officer.
9. The Board's Order No. 69-2 and 67-36 are rescinded.
10. The discharger shall permit the Regional Board:
 - (a) Entry upon premises on which waste are located or in which any required records are kept,
 - (b) Access to copy any records required to be kept under terms and conditions of this Order,
 - (c) Inspection of monitoring equipment or records, and
 - (d) Sampling of any discharge.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 16, 1979.

FRED H. DIERKER
Executive Officer

Enclosure:

Map - Attachment A
Resolution No. 77-7
Self-Monitoring Program



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
SAN QUENTIN DISPOSAL COMPANY
SAN QUENTIN CLASS II-2 DISPOSAL SITE
SAN RAFAEL, MARIN COUNTY
ATTACHMENT A
ORDER NO. 79-11

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 77-7

MINIMUM CRITERIA FOR PROPER CLOSURE OF
CLASS II SOLID WASTE DISPOSAL SITES

- I. WHEREAS, experience has shown that Class II solid waste disposal sites can be sources of serious water pollution problems even after their use has been terminated, unless properly closed, and
- II. WHEREAS, these problems may include: odors, discharge of leachate, exposed refuse due to inadequate cover, and ponding of refuse-polluted water on the site, and
- III. WHEREAS, Section 2535 of the California Administrative Code provides as follows:

Completion of Disposal Operations. (a) Prior to cessation of disposal operations at a waste disposal site, the operator shall submit a technical report to the appropriate regional board describing the methods and controls to be used to assure protection of the quality of surface and groundwaters of the area during final operations and with any proposed subsequent use of the land. This report shall be prepared by or under the supervision of a registered engineer or a certified engineering geologist.

(b) The methods used to close a site and assure continuous protection of the quality of surface and groundwater shall comply with waste discharge requirements established by the regional board.

(c) The owner of the waste disposal site shall have a continuing responsibility to assure protection of useable waters from the waste discharge, and from gases and leachate that are caused by infiltration of precipitation or drainage waters into the waste disposal areas or by infiltration of water applied to the waste disposal areas during subsequent use of the property for other purposes, and

- IV. WHEREAS, the establishment of minimum criteria for proper closure of Class II solid waste disposal sites is desirable to protect the quality of waters of the State and to alert site owners and operators as to their specific responsibilities, and

- V. WHEREAS, pursuant to Section 15104 of the California Environmental Quality Act Guidelines, this Resolution applies to minor alterations to land which do not have significant adverse effects on the environment and is therefore exempt from the provisions of the Act.
- VI. THEREFORE BE IT RESOLVED that this Regional Board establishes the following minimum criteria for proper closure and subsequent maintenance of Class II solid waste disposal site:
1. All completed disposal areas shall be compacted and provided with a final cover of at least three feet of clean soil. A lesser thickness of final cover may be allowed upon a demonstration that, due to thorough compaction of refuse or other factors, differential settlement is likely to be minimal. At least one foot of the final cover shall be compacted to attain a permeability no greater than 10^{-6} cm/sec. Exceptions to this requirement may be granted upon a demonstration that equivalent protection against water penetration may be provided by other means.
 2. Completed disposal areas shall be graded and maintained to prevent ponding and to provide slopes of at least three percent. Lesser slopes may be allowed if a sewer system or other equivalent means of carrying off surface drainage is provided. Steep areas, surface drainage courses, or other areas subject to erosion shall be provided with a lining, or planted with vegetation, or otherwise designed to prevent such erosion.
 3. Slopes shall be designed to minimize the potential for sliding by control of grades, drainage, or other means. Any slides observed within the disposal area shall be promptly stabilized, and the Executive Officer shall be notified immediately upon discovery of a slide.
 4. All necessary facilities shall be provided to ensure that leachate from group 2 waste and ponded water containing leachate or in contact with refuse is not discharged to surface waters of the State.
 5. The disposal area(s) shall be protected from any washout or erosion and from inundation, which could occur as a result of tides or of floods having a predicted frequency of once in 100 years.
 6. All necessary facilities shall be provided to protect usable groundwaters from degradation as a result of leachate discharges or carbon dioxide migration.
 7. The migration of methane gas from group 2 waste shall be controlled as necessary to prevent creation of a nuisance.

VII. BE IT FURTHER RESOLVED that this Board's Executive Officer will request that closure plans be submitted by operators of all Class II sites at the earliest practicable date. Closure plans will be approved by this Board by inclusion in waste discharge requirements. The Board will amend closure plans as necessary to provide for conformance with the above minimum criteria. Site closure plans shall include the following:

- a. The boundaries of areas used for waste disposal.
- b. Method of control of surface drainage flow from the site.
- c. Evaluation of the anticipated settlement due to decomposition and consolidation of the wastes.
- d. Thickness of cover and physical properties including permeability, expansion characteristics and erodibility.
- e. Relationship of waste disposal area to underlying groundwater quality.
- f. Location of groundwater monitoring points.
- g. Method for control of methane.
- h. Proposed subsequent use of the land.

VIII. BE IT FURTHER RESOLVED that this Board will normally require implementation of the site closure plan as rapidly as possible after completion of group 2 waste disposal operations at a site or portion thereof. The Board may authorize delays of specified duration in meeting final slope requirements pending determination of subsequent land use, provided interim measures are taken to protect water quality.

IX. BE IT FURTHER RESOLVED that it is the intention of this Board to take all measures practicable to ensure that subsequent owners of sites are made aware of site closure requirements.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 19, 1977.

FRED H. DIERKER
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

San Quentin Disposal Company & Cal-Pox, Inc.

San Quentin Class II Solid Waste Disposal Site

San Rafael, Marin County

ORDER NO. 79-11

CONSISTS OF

PART A

AND

PART B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SAN QUENTIN DISPOSAL COMPANY AND CAL-POX, INC.
SAN QUENTIN CLASS II DISPOSAL SITE
SAN RAFAEL, MARIN COUNTY

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board, including the methods specified in attached APPENDIX I.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health or a laboratory approved by the Executive Officer. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. Grab sample means a sample collected at any time.

2. Standard Observations

a. Receiving Water - Periphery of Disposal Facilities

- (1) Discoloration and turbidity: description of color, source, and size of affected area.
- (2) Odor: presence or absence, characterization, source, and distance of travel.
- (3) Evidence of beneficial water use: presence of water-associated wildlife, fishermen, and other recreational activities in the vicinity of the sampling stations.
- (4) Hydrographic condition:
 - (a) Water and sampling depths.
- (5) Weather condition:
 - (a) Wind - direction and estimated velocity.
 - (b) Precipitation total precipitation during the previous five days and on the day of observation.

b. Land Retention or Disposal Area

This applies both to liquid and solid wastes confined or unconfined.

- (1) Evidence of leaching liquid from area of confinement and estimated size of affected area. (Show affected area on a sketch.)
- (2) Odor: presence or absence, characterization, source, and distance of travel.
- (3) Estimated number of waterfowl and other water-associated birds in the disposal area and vicinity.

D. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

The discharger is required to perform observations, sampling, and analyses according to the schedule in Part B.

E. RECORDS TO BE MAINTAINED

1. Written records shall be maintained at the landfill office and shall be retained for a minimum of 3 years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:
 - a. Identity of sampling and observation stations by number.
 - b. Date and time of sampling and/or observations.

- c. Date and time that analyses are started and completed, and name of personnel performing the analyses.
- d. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to specific section of Standard Methods is satisfactory.
- e. Calculations of results.
- f. Results of analyses and/or observations.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

- 1. Written reports shall be filed for each calendar month (unless specified otherwise in Part B) by the fifteenth day of the following month. In addition, an annual report shall be filed as indicated in F-1-f. The reports shall be comprised of the following:

- a. Letter of Transmittal:

A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include a discussion of requirement violations found during the past month and actions taken or planned for correcting violations, such as plant operation modifications and/or plant facilities expansion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

Monitoring reports shall be signed as follows:

- (1) In the case of corporations, by a principal executive officer at the level of vice-president or his duly authorized representative if such representative is responsible for the overall operation of the facility from which the discharge originates,
- (2) In the case of a partnership, by a general partner, or
- (3) In the case of a sole proprietorship, by the proprietor,
- (4) In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

- b. Compliance Evaluation Summary

Each report shall be accompanied by a compliance evaluation summary sheet prepared by the discharger. The report format will be specified by the Regional Board.

c. Map or Aerial Photograph

A map or aerial photograph shall accompany the report showing sampling and observation station locations.

d. Results of Analyses and Observations

Tabulations of the results from each required analysis specified in Part B by date, time, type of sample, and station, signed by the laboratory director. The report format will be specified by the Regional Board.

e. List of Approved Analyses

- (1) Listing of analyses for which the discharger is approved by the State Department of Health.
- (2) List of analyses performed for the discharger by another approved laboratory (and copies of reports signed by the laboratory director of that laboratory shall also be submitted as part of the report).

f. Annual Reporting

By January 30 of each year, the discharger shall submit an annual report to the Regional Board covering the previous calendar year. The report shall contain:

1. Tabular and graphical summaries of the monitoring data obtained during the previous year.
2. Comprehensive discussion of the compliance record and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.
3. A map showing the area in which filling has been completed during prior calendar year.
4. Summary of groundwater analyses indicating any change in the quality of the groundwater.

PART B

I. DESCRIPTION OF SAMPLING STATIONS & SCHEDULE OF SAMPLING, ANALYSES & OBSERVATIONS

A. WASTE MONITORING

1. Monthly, record the total volume and weight of a refuse (in cubic yards and tons) deposited on the site during the month, and the daily average. Report quarterly.
2. Monthly, record the volume of fill completed, in cubic yards, showing the location(s) and dimensions on a sketch or a map. Report Quarterly.

(Weight of the refuse shall be estimated)

B. ON SITE OBSERVATION

<u>Station</u>	<u>Description</u>
S-1 thru S-'n'	Observation stations located on presently active area or completed portion of the site at grid squares delineated by 500 foot grid network.

<u>Station</u>	<u>Frequency of Observation</u>	<u>Observations</u>
All S Stations active disposal areas	Weekly throughout the year <u>Report Quarterly</u>	<ol style="list-style-type: none">1. Evidence of ponded water at any point on the fill area.2. Evidence of refuse not confined within the fill area.3. Evidence of erosion and "day-lighted" refuse.4. Evidence of waste in contact with pools of surface water.5. Evidence of odors presence or absence, the characteristics, intensity, source, distance of travel.6. Evidence of leachate leaving the disposal site, and estimated size of affected area.

C. SEEPAGE AND/OR LEACHATE MONITORING

<u>Station</u>	<u>Description</u>
L-1 thru L-1n	At a point at which discharge occurs from the disposal area(s). Include a map indicating locations of discharge(s).

<u>Station</u>	<u>Type of Sample and Frequency</u>	<u>Analyses</u>	<u>Units</u>
All L Stations	Grab sample daily during each discharge or occurrence	COD Dissolved sulfide Odors Color pH Conductivity	mg/l mg/l description description electrometric units micromhos/cm

A report shall be made by telephone of any seepage or leachate leaving the property immediately after occurrence. A written report shall be filed with this Board within five days and shall contain the following information: (1) Map showing location(s) of discharge (2) flow rate (3) Nature of effect (i.e. discoloration of receiving water, size of affected area, and (4) Corrective measures undertaken.

D. GROUNDWATER MONITORING

<u>Station</u>	<u>Description</u>
G-1 & G-2	Groundwater monitoring wells located in the perimeter levee as shown on Attachment B.
GR-1 thru GR-5	Risers located in the filled portions of the refuse site as shown on Attachment B.

<u>Station</u>	<u>Type of Sample and Frequency</u>	<u>Analysis</u>	<u>Units</u>
All "GR" Stations	Observe <u>Quarterly</u> throughout the year	Leachate level	feet
All "G" Stations	Grab sample <u>Quarterly</u> throughout the year	Chloride Nitrate Nitrogen COD Water level	mg/l mg/l mg/l feet

All "G" stations must be pumped a minimum of two minutes prior to sampling.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in the Regional Board Order No. 79-11.
2. Has been ordered in writing by the Executive Officer on January 22, 1979 and becomes effective February 1, 1979.
3. May be reviewed at any time subsequent to the effective date upon written notice from either the Executive Officer or the discharger, and will be revised upon written agreement of the Executive Officer and the discharger.

FRED H. DIERKER
Executive Officer

Attachment:
Reporting Format Example
Attachment B - Map

An Example

A. WASTE MONITORING

1. Daily average approx (yd^3), total volume (yd^3) and weight (tons)
2. Include map showing the location(s) and dimensions on a sketch or map for volume of fill completed.

Refuse Deposited on Site During Month		Volume of Fill Completed	
Date	Total Volume yd^3	Total Weight Tons	yd^3
JAN			
FEB			
MAR			
APR			
MAY			
JUNE			
JULY			
AUG			
SEP			
OCT			
NOV			
DEC			

ON SITE OBSERVATIONS

Note: Include Map and Location of Stations

ALL STATIONS

[illegible]

An Example

C. Leachate and/or Seepage

Include a map indicating locations of discharge (s)

Date: _____

Station _____

Time _____

Observations _____

Color Type _____

Odor Intensity _____

Source _____

Analyses: _____

Dissolved _____

Oxygen mg/l _____

Sulfides (mg/l) _____

Total _____

Dissolved _____

pH _____ units (electrometric)

COD (mg/l) _____

Conductivity _____

Micromhos/cm _____

Analysis by: _____

Note: Written report shall be included to describe the locations of seepage, affected areas, flow rate, and corrective action undertaken

